

Children and falls



Falling is a normal part of the way a child develops – learning to walk, climb, run, jump and explore the physical environment. Fortunately, most falls are of little consequence and most children fall many times in their lives without sustaining much more than a few cuts and bruises. But some falls go beyond the resilience of a child's body, making them the fourth largest cause of unintentional injury death for children. Non-fatal falls also represent a significant burden on health care facilities around the world. The frequency of non-fatal falls, health-care costs, and the significant risk of death (particularly as a result of head injuries) demand that the prevention of fall-related injuries becomes a vital focus of child safety efforts worldwide.

What is a fall?

A fall is an event which results in a person coming to rest inadvertently on the ground or floor or other lower level (WHO).

Scale of the problem

Mortality

- In 2004, an estimated 424 000 people of all ages died from falls worldwide – over 46 000 were children.
- Although the majority of fall-related deaths are among adults, falls rank as the 12th leading cause of death among 5–9 year olds and 15–19 year olds.
- Among children under 15 years, non-fatal falls are the 13th leading cause of disability-adjusted life years lost.
- South-East Asia and the low-income countries of the Eastern Mediterranean and Western Pacific have the highest rates of fatal falls.
- Most high-income countries have fatal fall rates of 0.3 per 100 000 or less.
- 66% of fatal falls among children occur from a height, while 8% were the result of falls on the same level.

Fatal child fall injury rates per 100 000 population^a by sex, country income level and WHO region, 2004

	Africa	Americas		South-East Asia	Europe		Eastern Mediterranean		Western Pacific	
	LMIC	HIC	LMIC	LMIC	HIC	LMIC	HIC	LMIC	HIC	LMIC
Boys	1.8	0.3	1.0	3.0	0.5	1.3	4.0	3.5	0.5	2.5
Girls	1.1	0.1	0.4	2.4	0.2	0.6	0.3	2.3	0.3	1.9

^a These data refer to those under 20 years of age.

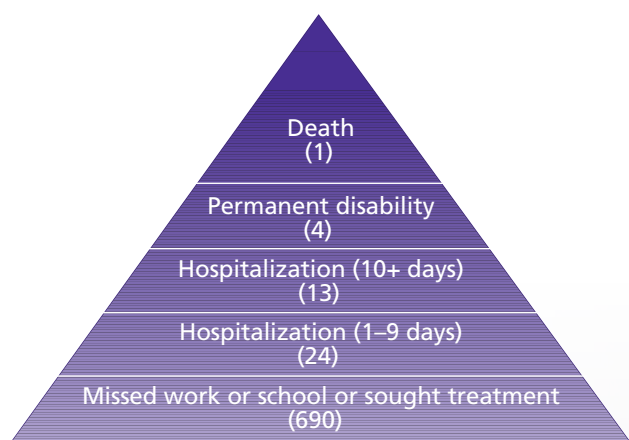
HIC = High-income countries;
LMIC = Low-income and middle-income countries.

Source: WHO (2008), *Global Burden of Disease: 2004 update*.

Morbidity

- Data indicate that falls comprise a leading, if not the most frequent, type of injury resulting in hospitalization emergency room attendance or restricting activity in most high-income countries.
- An injury survey in China reported that for every child death resulting from a fall, there were 4 cases of permanent disability, 13 cases requiring hospitalization for 10 or more days, 24 cases requiring hospitalization for 1–9 days, and 690 cases who sought care or missed at least one day of work or school.

Injury pyramid for fall-related injuries among children 0–17 years, Jiangxi province, China



- Falls are the leading cause of traumatic brain injury, with a significant risk of long-term sequelae especially among young children.
- Falls are costly. An estimate from Canada suggests that if proven fall prevention strategies were implemented they would result in a 20% reduction in the incidence of falls and net savings of more than 126 million Canadian dollars (US\$ 120 million) annually.

Risk factors

- In every region of the world more boys die from falls than girls.
- Infants less than one year of age in low-income and middle-income countries are at the greatest risk.
- There is a strong relationship between social class and childhood falls, both between regions and within countries. Risks identified include greater exposure to overcrowding, hazardous environments, sole parenthood, unemployment, young maternal age, low maternal education, caregiver stress and mental health problems, and inequities in access to health care.
- Consumer products such as prams, baby walkers, high chairs, changing-tables and cots which do not conform to standards present risks in high-income countries and are increasingly considered to be a problem for children in low-income and middle-income as their availability grows.
- Children in the labour force are at substantial risk of falls because the work demands more than their developmental skills, strength, stamina and size allow.
- Other risk factors for falling include: animal riding, inappropriate heights and surfacing in playgrounds, and inadequate supervision of younger children.

“Falls are the most common type of childhood injury presenting at emergency departments, accounting for between 20–25% of such visits.”

Interventions

Effective approaches to reducing falls —

- ✓ Identifying, replacing or modifying unsafe products. For example removing or redesigning nursery furniture such as cribs, changing mats, baby walkers and bunk beds.
- ✓ Developing and enforcing standards for the design and maintenance of safe playgrounds, including installation of rubber or bark ground surfacing of sufficient depth, and the incorporation of safe heights for climbing structures and equipment such as slides.
- ✓ Establishing and enforcing legislation requiring the installation of window guards by landlords in buildings with more than one storey.
- ✓ Developing and implementing multifaceted community programmes that use multiple educational strategies repeated in different forms and contexts as a means of fostering a culture of safety within communities.

What does not work?

- ✗ There is insufficient evidence to promote the use of stand-alone educational campaigns, implementing housing and building codes and covering wells and ditches as fall prevention strategies.